

## CLAIMS:

1. A display device for displaying gray tone images with a monitor (31) driven by  $s$  electron rays, characterized in that a correction unit (33) is provided for generating  $s$  output image signals  $A_s$ , which comprise gray tone values forming part of a set  $K$  of correction gray tones, from an image signal (34) which contains gray tone values forming part of a set  $M$  of original gray tones (23), and in that said  $s$  output image signals  $A_s$ , after a D/A conversion, are designed to be supplied each to an electron ray of the monitor for a brightness-corrected display of a gray tone in a point of the monitor (31).  
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2. A device as claimed in claim 1, characterized in that a correction unit (33) for the supply of an  $n$ -bit wide image signal (34), which comprises  $2^n$  possible gray tone values, and  $s$  correction sets  $K_s$  with each  $2^n$  gray tone values are provided, and in that said correction unit (33) is designed for assigning to each gray tone value from among the original gray tones (23) one gray tone value from each of the  $s$  correction sets  $K_s$ .  
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3. A device as claimed in claim 1, characterized in that a photosensor (32) is provided so as to adapt the assignment of the gray tone values in the correction unit (33) in dependence on the measured ambient light surrounding the monitor (31).  
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4. A device as claimed in claim 1, characterized in that a luminance sensor (30) is provided for detecting the brightness values of the monitor (31) for the purpose of calibrating the correction unit (33).  
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5. A device as claimed in claim 1, characterized in that a photosensitive sensor is arranged such that it first records the brightness distribution of the monitor and subsequently measures the ambient light surrounding the monitor through a change in the orientation of the sensor.  
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6. A device as claimed in claim 1, characterized in that the correction unit (33) is designed for calculating the luminance curves in accordance with a calculation instruction, the luminance values being a function of the user-specific brightness and contrast values.

5 7. A device as claimed in claim 1, characterized in that a memory (22) for storing the image signal (34) and for transferring the image signal (34) to the correction unit (33) is provided.

10 8. A display device for rendering gray tone images with a triple-gun monitor driven by three electron rays, characterized in that a correction unit (33) for generating three corrected output image signals  $A_s$  from a set M of original gray tones (23) of an image signal (34) is provided, and in that said three output image signals  $A_s$ , after a digital/analog conversion, are designed to be fed each to one electron ray of the triple-gun monitor for being jointly pictured on a pixel for a brightness-corrected display of the gray tone on the triple-gun monitor.

15 9. A device as claimed in claim 8, characterized in that a three-channel color graphic card is provided for the digital/analog conversion of the corrected output signals  $A_s$ .

20 10. A device as claimed in claim 1, characterized in that s correction sets  $K_s$  with a bit depth smaller than n are provided so as to be assigned to an n-bit wide image signal (34), and in that the digital/analog converters for the D/A conversion of the s output image signals  $A_s$  have a processing width smaller than n.

25 11. A device as claimed in claim 1, characterized in that X-ray devices or computer tomography devices or magnetic resonance tomography devices or ultrasound devices are provided for the recording of gray tone images.